

# Urban ecosystems and livestock keeping- an emerging risk for zoonoses

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## Urban animals

Today more than half of the global population live in urban areas, and the cities keep growing. In addition to a dense population of humans, there are also large populations of animals, including peri-domestic wildlife, pets, and livestock. Urban livestock keeping contributes to people's livelihood all along the value chains and is important for the food and nutrition security in low and middle-income countries. Zoonotic pathogens are spread from animals to humans, and the increased interface between livestock and humans in cities may contribute to increased risks.

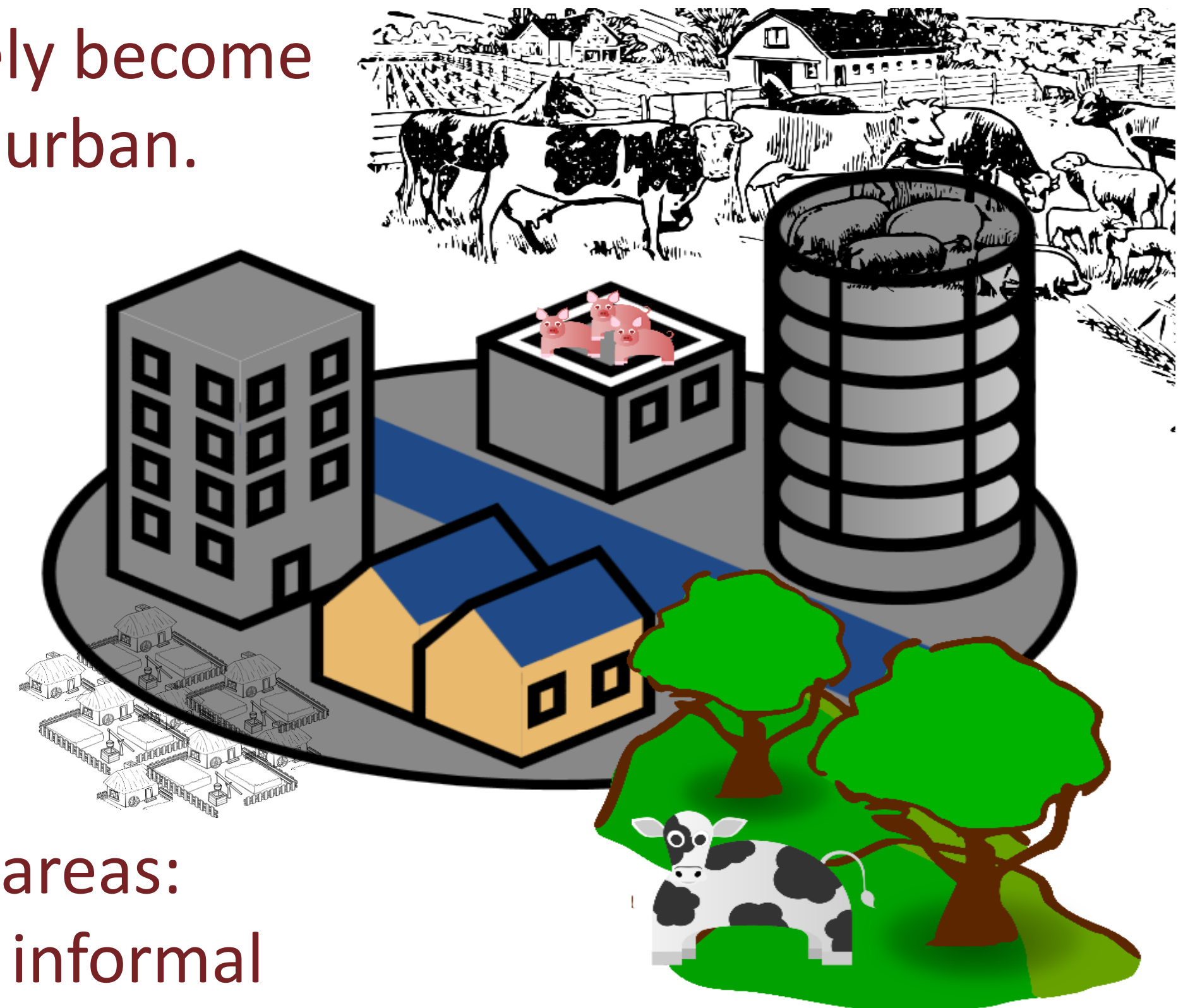
## Methods

We conducted a literature review to quantify studies conducted on zoonoses in urban animals. The search in Pubmed, CabDirect and Web of Science, plus the search in institutional data bases gave a total of 876 records. After exclusions, in total 80 full papers and 13 abstracts were reviewed and data extracted.



Expansion of cities:

Through areal expansion, rural farms may successively become peri-urban, and then urban.

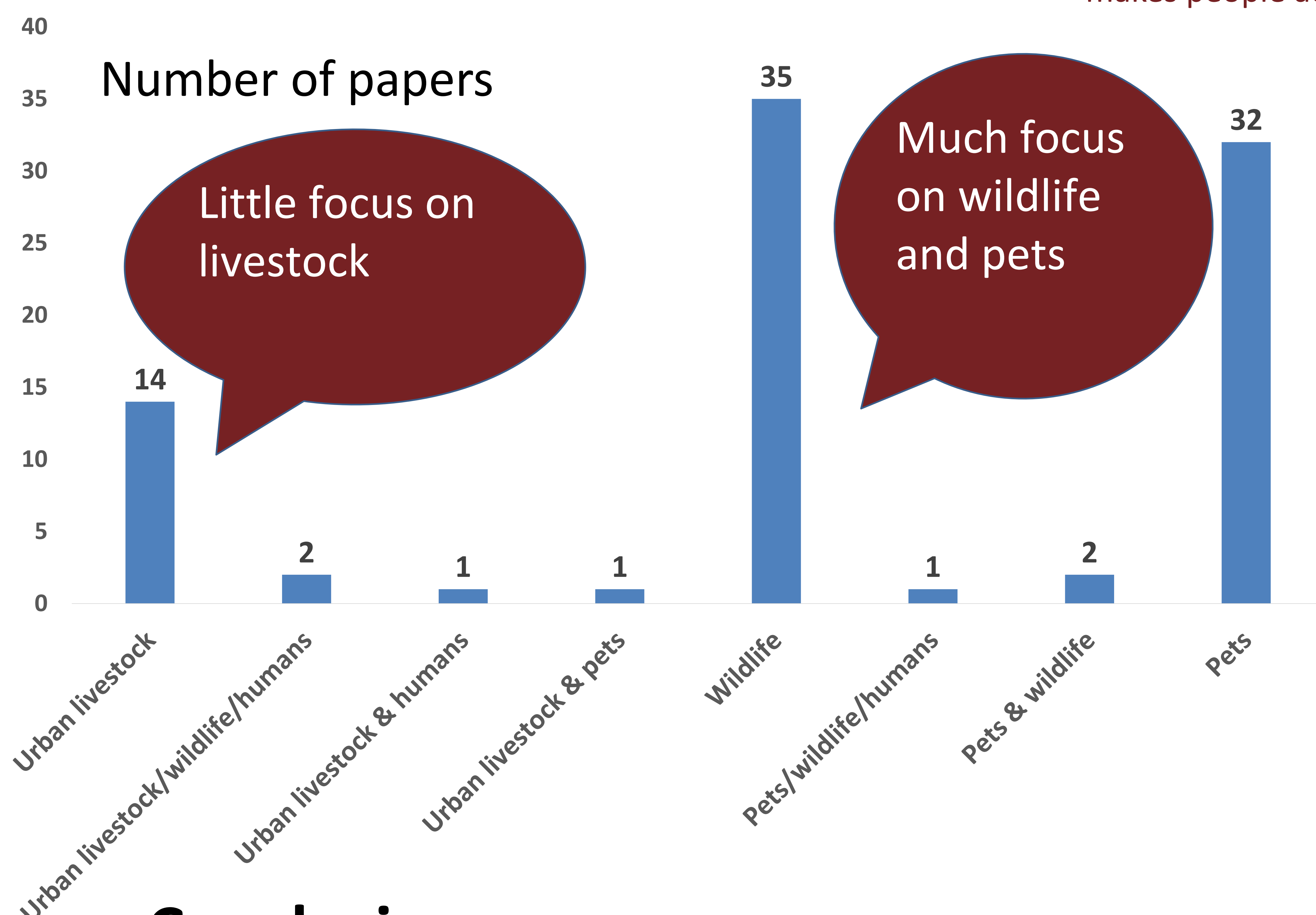


Migration from rural to urban:  
Farmers bring their animals with them, or they acquire animals in the city since they are used to livestock keeping.

Low-income areas:

In slums and informal settlements the need to grow food and to get extra income makes people acquire animals.

Public green spaces:  
Cultivation and grazing livestock may occur as a means to increase food security.



Pathogen focus of the papers	
Avian influenza virus/Influenza A	4
Brucella	5
Campylobacter	5
Cryptosporidium	7
Gastrointestinal helminths	25
Giardia	6
Leishmania	6
Leptospira	7
Mycobacterium	3
Rabies virus	6
Salmonella	8
Toxoplasma	8

## Conclusions

- In spite of importance of urban livestock, not prioritized
- Research focus not on the priority diseases from OIE and WHO

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